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The Value of Antipyrine in Puerperal Fever.

BY

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THE VALUE OF ANTIPYRINE IN PUERPERAL FEVER.

By PAUL F. MUNDÉ, M. D.

The remarks made by several prominent obstetricians at the first meeting of the German Gynæcological Society in Munich last June, while discussing the treatment of puerperal fever, to the effect that they had abandoned the use of antipyrine in that disease, because they saw no particular or lasting benefit from it, induce me to carry out an intention formed previous to that meeting to report my experience with that remedy in a number of cases of puerperal septicæmia and peritonitis during the past two years. During this time I chanced to see quite a number of such cases in consultation, in nearly all of which I recommended the use of antipyrine to reduce the temperature, and the result was such as to lead me to look on this remedy as a great boon, far superior as an antipyretic to quinine, aconite, or even cold, which agents have hitherto been our main-stays in reducing temperature. It would seem almost useless to say that all I expect from antipyrine is its temporary antipyretic effect, and that a permanent or curative influence is not hoped for, did not the German obstetricians referred to make this want of permanency of the reduction of temperature one of their reasons for discarding it. But I can not

help thinking it a poor reason for not employing a remedy simply because its effect is less permanent than we might desire when we have no better substitute at hand. In a disease like puerperal septicæmia it seems to me that *any* remedy which affords even temporary relief should be eagerly grasped, since often so little can be done in this fearful malady.

While the measures recommended by the German obstetricians—the dull curette to remove decomposing remnants of placenta and coagula, intra-uterine irrigation, cold affusions, baths, and compresses, to reduce temperature, alcohol and nourishment to maintain strength—are also those employed by us, it is well known that irrigations have but an early and limited value, and that the application of cold to a large part of the body, especially after confinement, is dangerous, and may be followed by shock and collapse, not to mention the inconvenience of such applications. For these reasons, the practical and convenient ice-water coil has been introduced, which certainly, as an antipyretic, does all that can be expected from a measure applied to so limited an area of the body as the skin of the abdomen. But even from these heat-reducing methods only a temporary result is obtained, and they require more or less frequent repetition.

What more convenient, then, than the administration of antipyrine at times, at intervals, and in doses proportionate to the return and intensity of the fever? Of course, we know that the period of comparative apyrexia which soon follows the use of the remedy is but temporary, and that perhaps soon the temperature will rise to its former height, and the remedy require to be repeated, which alternative may occur again and again for many days. But, in the intervals of comfort and freedom from fever, the exhausted system has an opportunity to recuperate by sleep and by the accumulation of

the vital force which has been consumed by the fever, and we thus gain time to aid the system in throwing off the poison and weathering the disease. Surely this is not theory or fallacy, but can be and often has been demonstrated at the bedside!

What I have said applies equally to any acute inflammatory affection characterized by general rise of temperature. But I do not know whether the administration of antipyrine during puerperal septicæmia or peritonitis has become so general as the use of the remedy in internal medicine. I, for my part, certainly feel that its careful, systematic, and persistent employment has had a large share in enabling a number of the patients with puerperal fever whom I have seen in consultation to survive the disease. In making this assertion I do not undervalue the ice-water coil, or the stimulants and nutrients which were crowded into the patients almost *ad nauseam*.

The manner of administering antipyrine as to dose, repetition, and vehicle, is, I think, of prime importance, if we would secure a rapid, satisfactory, and safe effect. To give it in large doses, say 20 to 30 grains, repeated every hour or two until 60 or 90 grains have been given, is, I am sure, exceedingly hazardous. The objection has been made that the reduction of temperature may be too rapid and intense, falling even below 98°, and that collapse may occur. This is perfectly true, and I once saw the temperature fall from 104° to 96·5° F. in a hospital case of pelvic peritonitis, after two doses of 20 grains each, within three hours.

In one consultation case last winter I could find nothing to account for the temperature of 102° but a comparatively small exudation in the left broad ligament, the size of which hardly seemed to account for the sharp collapse and small pulse of 120 beats. At a loss to comprehend the cause of the collapse, I continued my inquiries, with the re-

sult of ascertaining that the attending physician, the temperature having been 105°, had given 30 grains of antipyrine in one dose shortly before my arrival. Appropriate stimulation soon brought down the pulse and relieved the collapse.

I have always followed the rule never to begin with a larger dose than 20 grains (if the patient is strong), and to follow it up with 10- or 5-grain doses every half-hour or hour until 20 grains more have been taken. Usually, and always if the patient's strength is below par, I begin with but 10 grains, and give 5 grains every half-hour until 20 more have been taken, which will make 30 grains within a little over two hours. The pulse is carefully watched, and any sign of flagging means discontinuance of the antipyrine and the use of stimulants.

This same quantity or less is ordered to be repeated as soon as the temperature (taken in the mouth, rectum, or vagina) rises above 102°. Seldom have I found it necessary to order this quantity of 30 grains in divided doses to be given more than twice in the twenty-four hours; generally but once, usually toward evening. Once, however, for over two weeks, the patient's constantly recurring rise of temperature required the daily consumption of from 60 to 90 grains, until, finally, the temperature remained down, and recovery took place.

All the patients were under the care of trained nurses, who were carefully instructed to take the temperature and pulse at regular intervals, and administer the antipyrine in strict accordance with their instructions and the effect of each dose. As soon as the temperature fell below 101°, as a rule, the remedy was discontinued. In this manner I never saw the least sign of collapse or excessive reduction of temperature (in the case above referred to the house surgeon gave the antipyrine in my absence), and can report none but the happiest results from the drug.

It was given either in solution with syrup and water, five grains to the tablespoonful, or in gelatin capsules (my favorite form), or, if the stomach was irritable, by suppositories or enema, in both of which latter forms it acted admirably. In some cases I found it necessary to give it hypodermically, which was readily feasible, as it is very soluble, one grain being dissolved in one minim of water.

In addition to the antipyrine, I always had the ice-water coil applied when the temperature rose, and removed when it fell. And I often gave five-grain doses of quinine every three to four hours if the stomach could bear it, merely for its tonic properties. But I feel convinced that the quinine had but a small, and the ice water only a moderate, share in the recovery of the patients.

Out of the twenty-eight cases of puerperal septicæmia (nineteen) and puerperal peritonitis (nine) which I have seen in consultation during the past two years, since I have been using antipyrine systematically in this disease, only three proved fatal, one of which developed chronic encysted peritonitis, to which the patient succumbed five weeks after delivery. Surely this is not a large proportion, especially when we consider that a consultant is often not called until the case becomes very serious, perhaps actually hopeless, and when I state that one of these patients was actually moribund when I saw her.

The third case I saw last April, and found absolutely intractable to remedies, each lull in the disease being speedily followed by a fresh accession of septic infection more violent than the preceding one.

I do not deny that I always expect a more lasting effect from the antipyrine and other similar remedies in the cases where the local inflammation predominates than when no cause for the fever can be found by an examination of the pelvic organs. And yet it has seemed to me that in pre-

cisely those pure cases of septic infection with no apparent source has the antipyretic effect of antipyrine been most grateful and satisfactory.

I will not weary the reader by detailing cases which all present the same general features. Suffice it to state that the repeated daily use of antipyrine, once or oftener in the twenty-four hours if the rise of temperature called for it, continued for days and even as long as three weeks, has, with proper precautions as to indications, doses, and mode of administration, proved in my hands a most potent symptomatic remedy, free from danger, in puerperal septicæmia.

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